US-PAT-NO: 5918210

DOCUMENT-IDENTIFIER: US 5918210 A

TITLE: Business query tool, using policy objects to provide
               query responses

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Brief Summary Text - BSTX (12):
   In the absence of the present invention, the effect, if any, of different
policies depends on the memory of the user. If a policy has changed, the user
must remember to apply the correct policy for the time period in question.
This significantly limits the usefulness of the database as an analytical tool.
However, with the present invention, when a **new policy** comes into effect, an
old policy is not "overwritten" but rather is stored as a different
implementation of any method that is affected by the policy. As a result of
the invention, a database user is provided with meaningful and correct
information rather than simply retrieved data. Answers to queries can be based
on whatever policies were in effect at a relevant time or are presently in
effect. Thus, the user obtains information having the correct historical
perspective rather than misleading data. A brand-new employee acquires the
same information as an old-timer with years of acquired knowledge would have.

Detailed Description Text - DETX (29):
   A Computational Method performs computations that may involve many objects
and methods. A Computational Method is implemented by one of various Version
Dependent Implementations. A Version Dependent Implementation is code that
implements a Computational Method for a specified **Policy Version**.

Detailed Description Text - DETX (31):
   A Policy is an object that represents a business rule or set of business
rules that accomplish a business activity When the information manager data 12b
is set up in the business database, each policy is given a data representation
As stated above, a policy may be a hypothetical policy or actual policy. An
actual policy may be time-varying or may vary with some other factor. A
Policy's relationship to other data is established consistent with the
relationships of FIG. 3. If the business subsequently changes a policy or adds
a **new policy,** that policy is added to the information manager data 12b.

Detailed Description Text - DETX (34):
   A Data-Determining Policy determines the value or content of data. It has a

Policy Version, which controls the contents of Policy Data. Policy Data has effective dates, which correspond to the effective dates of the **Policy Version**.

Detailed Description Text - DETX (35):

A Computation-Defining Policy is a policy that determines rules about computing data derived from other data. It has a **Policy Version, which helps define a Policy Version** Method. A **Policy Version** Method is valid for Version Dependent Implementations. A Version Dependent Implementation calls an Available Method on a Class.

Detailed Description Text - DETX (36):

Using the Workforce Strength example, Workforce Strength is an Available Method on the Employee class. It is a Computational Method type of Method. Because its computation may differ depending on **policy, it is implemented by various Version** Dependent Implementations. When a user selects a Workforce Strength method, the reporting tool determines that there is more than one Version Dependent Implementation to use in answering the query. It presents to the user the different **Policy Versions** that help define the Version Dependent Implementations. It then accepts the user's selection from these **Policy Versions**.

Detailed Description Text - DETX (37):

As another example, a user might inquire about average salaries per pay period, where "pay period" may be different according to different policies. One policy might result in a different number of pay periods per year than another. The number of pay periods per year is determined by an Accessor Method. An Accessor Method has a single method implementation, but it is a Date Effective Implementation. If the user enters a query whose answer requires the number of pay periods per year, the reporting tool retrieves Policy Data that represents different values for the number of pay periods per year. The **Policy Versions that result in this Policy** Data are presented to the user, who makes a selection. This results in the correct Policy Data being used for the Date Effective Implementation.